Oracle Day 6 – Aggregate Functions

Note: Please watch my YouTube sessions to better understand the descriptions and queries below

NiC IT Academy YouTube Videos for reference

🔵 Oracle SQL Tutorial - English

https://youtube.com/playlist?list=PLsphD3EpR7F9mmtY2jBt_O8Q9XmvrhQEF

🟡 Oracle SQL - தமிழில்

https://youtube.com/playlist?list=PLsphD3EpR7F-u4Jjp_3fYgLSsKwPPTEH4

📌 Oracle SQL Day wise Video: ENGLISH

Oracle SQL Day 1 – Introduction to Oracle - https://youtu.be/hLnKjYGr730

Oracle SQL Day 2 – SQL Types DDL, DML, DRL, DCL, TCL - https://youtu.be/XpgjXvnfZec

Oracle SQL Day 3 – Constraints in Oracle - https://youtu.be/TmYqeFfHyyc

Oracle SQL Day 4 – SELECT Statements in Oracle - https://youtu.be/tYQfBgUCpoI

Oracle SQL Day 5 – Single Row Functions in Oracle - https://youtu.be/4qJJxQuHLC4

Oracle SQL Day 6 – Joins in Oracle - https://youtu.be/CkaqluC2afE

Oracle SQL Day 7 – Aggregate Functions in Oracle - https://youtu.be/BSiCWzj-py8

Oracle SQL Day 8 – Sub Queries in Oracle - https://youtu.be/KtUCyG2cZe4

Oracle SQL Day 9 – SET Operators in Oracle - https://youtu.be/B0JbGbWsEIA

Oracle SQL Day 10 – Analytical Functions in Oracle - https://youtu.be/gRC3ndWLsoo

Oracle SQL Day 11 - Views in Oracle - https://youtu.be/m8a1UtOmd5k

Oracle SQL Day 12 - Indexes in Oracle - https://youtu.be/reL2O-kvNxc

Oracle SQL Day 13 - Regular Expression - https://youtu.be/k_Eo08vLPhU

Aggregate Functions:

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students

Stud_id	Stud_name	Year_of_study	Maths	Physics	Chemistry	Biology	Total_marks	Average
1000	Neena	1	89	84	90	79		
1001	Lex	1	80	99	84	74		
1002	Alexander	1	94	92	87	81		
1003	Bruce	1	90	94	98	84		
1004	David	1	92	86		94		
1005	Valli	2	85	87	93	93		
1006	Diana	2	79	90	96	88		
1007	Nancy	2	72	91	85	92		
1008	Daniel	2	98	84	88	87		

min()

max()

sum()

Avg()

count()

select max(salary) from employees;

select min(salary) from employees;

select sum(salary) from employees;

select count(salary) from employees;

select avg(salary) from employees;

We can not select non-aggregate column with aggregate column.

select first_name,max(salary) from employees;

ORA-00937: not a single-group group function

select first_name,max(salary) from employees group by first_name;

-- wrong

select department_id,max(salary) from employees group by department_id;

--whenever we want to use wise keyword, use group by.

Filter condition on resultant of group by clause - We have to use having clause.

Having clause is always come with group by group by + having

select department_id,sum(salary) from employees group by department_id;

select department_id,sum(salary) from employees group by department_id having sum(salary) > 50000;

select first_name,max(salary) from employees;

--ORA-00937: not a single-group group function

select first_name,max(salary) from employees group by first_name;

-- wrong logic

select department_id,sum(salary) from employees where department_id is not null

group by department_id having sum(salary) >50000 order by 1;

The order of keywords in any oracle SQL statement.

1.from

2.where

3.group by

4.having

5.order by

```
select e.department_id,d.department_name, sum(salary)
from employees e , departments d
where e.department_id=d.department_id and e.department_id is not null
group by e.department_id,d.department_name
having sum(salary) >50000 order by 1;
```

--select the department where more than 30 employees are working;

```
select e.department_id,d.department_name,count(*)
from employees e inner join departments d
on e.department_id=d.department_id
group by e.department_id, d.department_name having count(*) > 30;
```

-- country wise employees count

```
select l.country_id,c.country_name, count(*) from employees e,departments d,locations l,countries c
where e.department_id=d.department_id and
d.location_id=l.location_id and l.country_id=c.country_id
group by l.country_id,c.country_name;
```

Exercise 2:

emp_id	emp_name	dob	salary	skillset	city_name	country
1000	Neena	10/02/16	30000	Java	Hydrabad	India
1001	Lex	11/08/16	12008	.net	Bagaluru	India
1002	Alexander	03/23/17	9000	Python	Pune	India
1003	Bruce	11/17/17	8200	Informatica	Hydrabad	India
1004	David	06/09/14	7700	Oracle	Pune	India
1005	Valli	12/17/16	35000	Java	Chennai	India
1006	Diana	09/23/14	6900	R	Hydrabad	India
1007	Nancy	10/22/17	11000	Bigdata	Chennai	India
1008	Daniel	03/16/15	3100	Tableau	Hydrabad	India
1009	Laura	02/02/16	2900	Qlikview	Bagaluru	India
1010	Mozhe	10/04/16	2800	Testing	Chennai	India
1011	James	01/16/17	2600	Java	Indiana	USA
1012	TJ	03/01/16	2500	.net	New York	USA
1013	Jason	04/16/16	8000	.net	Washington	USA
1014	Michael	12/24/15	8200	Java	Delaware	USA
1015	Ki	12/14/14	7900	R	California	USA
1016	Hazel	11/08/15	6500	Bigdata	New York	USA
1017	Renske	11/04/14	5800	Tableau	New York	USA
1018	Stephen	04/28/15	3200	Qlikview	New York	USA
1019	John	10/13/17	2700	Testing	Georgia	USA
1020	Joshua Peter	06/17/17	2400	Informatica	Virginia	USA
1021	Trenna	10/21/16	2200	Oracle	Rhode Island	USA
1022	Curtis	03/19/15	3300	Java	Michigan	USA
1023	Randall	11/26/16	2800	R	New York	USA
1024	Peter	08/21/17	2500	Bigdata	New Jersey	USA
1025	John	03/31/17	2100	Java	New Jersey	USA


```
create table employee
(
emp_id                          number,
emp_name varchar2(30),
dob                             date,
salary                          number,
skillset varchar2(30),
city_name varchar2(30),
country varchar2(30)
);
```

select * from employee;

```
-- 1) Find total number of
employees


select count (*) from employee; --
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--2) Find city wise total number of employees

select city,count (*) from employee group by
city;

-- 3) Find the total number of employees in each
country

select country,count (*) from employee group by
country;

--4) Find the total number of employees in
India

select count (*) from employee where country='India';

--5) Find the cities where more than 3 employees are working in
India

select city,count (*) from employee where country='India' group by city having count(*) >3;

-- 6) who is the youngest person?

select max(dob) from employee;

select * From employee where dob = (select max(dob) from
employee);

-- 7) who is the eldest employee?

select * From employee where dob = (select min(dob) from
employee);


-- 8) In which skillset, the highest number of employees are
working?
```

```
select skillset,count(*) from employee group by skillset order by 2
desc;

-- 9) Is there any employee with the same
name?

select emp_name,count(*) from employee group by emp_name;

select emp_name,count(*) from employee group by emp_name having count(*) >1;

-- 10) is there any duplicate employee_id?

select emp_id,count(*) from employee group by emp_id having count(*) >1;
```